

Title (en)

AVALANCHE PHOTODIODE STRUCTURE AND METHOD FOR MANUFACTURING SUCH A STRUCTURE

Title (de)

STRUKTUR VOM TYP LAWINENFOTODIODE, UND HERSTELLUNGSVERFAHREN EINER SOLCHEN STRUKTUR

Title (fr)

STRUCTURE DU TYPE PHOTODIODE À AVALANCHE ET PROCÉDÉ DE FABRICATION D'UNE TELLE STRUCTURE

Publication

**EP 3267493 B1 20190515 (FR)**

Application

**EP 17179780 A 20170705**

Priority

FR 1656581 A 20160708

Abstract (en)

[origin: US2018013030A1] A structure of the avalanche photodiode type includes a first P doped semiconducting zone, a second multiplication semiconducting zone adapted to supply a multiplication that is preponderant for electrons, a fourth P doped semiconducting "collection" zone. One of the first and second semiconducting zones forms the absorption zone. The structure also includes a third semiconducting zone formed between the second semiconducting zone and the fourth semiconducting zone. The third semiconducting zone has an electric field in operation capable of supplying an acceleration of electrons between the second semiconducting zone and the fourth semiconducting zone without multiplication of carriers by impact ionisation.

IPC 8 full level

**H01L 31/107** (2006.01)

CPC (source: EP US)

**H01L 31/02966** (2013.01 - US); **H01L 31/03046** (2013.01 - US); **H01L 31/107** (2013.01 - EP US); **H01L 31/1075** (2013.01 - EP US); **H01L 31/1832** (2013.01 - US); **H01L 31/1844** (2013.01 - US)

Cited by

CN109148623A; EP3660929A1; FR3089063A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

**EP 3267493 A1 20180110**; **EP 3267493 B1 20190515**; FR 3053837 A1 20180112; FR 3053837 B1 20180824; US 10559706 B2 20200211; US 2018013030 A1 20180111

DOCDB simple family (application)

**EP 17179780 A 20170705**; FR 1656581 A 20160708; US 201715643930 A 20170707